

OPEN LETTER

To : Mr Rick Brunt, Director of Engagement and Policy, Health and Safety Executive
cc : Ms Leona Cameron, Head of Health Safety and Wellbeing, Royal College of Nursing
Mr Nick Pahl, Chief Executive, Society of Occupational Medicine
Dr Barry Jones, Chair, Covid Airborne Protection Alliance

Date: 11 August 2022

Dear Mr Brunt

HSE Response to RCN / SoM questions at General Meeting 26 July 2022

Having watched the [HSE General Meeting](#) I have to say that it is very good to see the Executive communicating with stakeholders in this way. I was particularly interested in the issues raised during the Q&A session by representatives from the Royal College of Nursing and the Society of Occupational Medicine concerning the risks to healthcare workers whilst caring for patients infectious with COVID-19.

For the benefit of anyone who did not attend the meeting, I have summarised the questions and answers at Appendix 1. It may be helpful to glance through these first, since they set this letter into context.

I was pleased to hear you confirm that if there is a residual risk after the 'hierarchy of controls' has been applied, then there is definitely a role for PPE. However, you failed to answer the specific question raised by Ms Cameron as to when Respiratory Protective Equipment (RPE) such as FFP3 respirators should be worn, given that infectious persons generate aerosols whenever they speak, cough and sneeze. Indeed they emit aerosols with every single breath exhaled. These infectious aerosols accumulate in the air around them and can then be inhaled by others, such as healthcare workers (HCWs) when they provide direct care to those individuals, or whose work unavoidably involves close-quarter contact with service-users.

There is no denying that a wide range of control measures, at all levels in the 'hierarchy of controls', have their place in worker protection from what is generally referred to as 'long-range transmission' of COVID (not the least of which is workplace ventilation). Excellent online tools are available from organisations such as the [British Occupational Hygiene Society](#) to help duty-holders assess the adequacy of ventilation. However, for the purposes of this letter, I am not at all concerned with long-range transmission.

I have just one question for you, which specifically concerns close-quarter care (which National guidance for Infection Prevention and Control (IPC) defined as 'less than 2 metres'). This is the activity in which most healthcare workers are engaged for the majority of their time. It is, after all, what they do for us as patients. The term 'Healthcare workers' includes clinical and non-clinical workers in the health and social care sector, including care homes and provision of domiciliary care.

Health and Safety law dictates that a risk assessment must be "suitable and sufficient". The authors of the IPC guidance make it the responsibility of risk assessors throughout the health and social care sector to determine, via 'risk assessment', whether there is sufficient danger to workers' health to warrant them wearing Respiratory Protective Equipment. Your response to Ms Cameron makes it abundantly clear that HSE are also delegating responsibility down onto their unfortunate shoulders when many (as is clear from Ms Dunn's question) are of the opinion that the responsibility for has, since the outset of the pandemic, sat fairly and squarely on HSE's shoulders. A responsibility which has not been well met.

So my question for you is simple. **How exactly is anyone expected to do a risk assessment for close-quarter care of infectious patients that is "suitable and sufficient"?**

The Health and Safety Executive is brimming with highly qualified and experienced experts in the field of health and safety, risk assessment and respiratory protection. Please would you or one of your specialist inspectors set out for me in black and white the methodology they would use if they were risk assessing the scenario of a HCW caring at close-quarters for a patient who is infectious with COVID-19? Let us assume that the HCW involved is their son, daughter, spouse or other loved one – for this is the way that I explain the employer's duty of care to their employees when running health and safety training courses.

For the sake of example let us consider the simple activity of feeding a patient. What criteria would you consider in your risk assessment which would lead you to a reliable conclusion as to whether RPE should be worn or not, given that the following factors would need to be taken into account?

- Infectious aerosols in the air around the patient cannot be detected by any human sense (sight, smell etc)
- The concentration of the infectious agent (SARS-CoV-2 virions) suspended in the air around the patient cannot be directly measured by any meter, monitor or other direct-reading instrument (unlike other airborne agents such as toxic gases, vapours, dusts and fibres).
- The effect of infection upon the worker cannot be reliably predicted. Even young, healthy, non-BAME, non-pregnant healthcare workers can (and have) become seriously ill with COVID-19, with many going on to either die or develop serious chronic complications (Long-Covid).

I look forward to receiving your guidance/methodology for carrying out such a risk assessment – as, I imagine, will healthcare staff across the UK who have been assigned responsibility for these assessments.

In my 28 year career as a health and safety practitioner, the one thing that irritates me the most is when duty-holders attempt to use (or misuse) “risk assessment” as a means of justifying doing something which is inherently dangerous and for which they don’t want to implement appropriate controls. How often do we hear it said “I’ve done my risk assessment – my assessment is that it (the activity) is safe enough if people use their common sense and exercise due care and caution”.

That is similar in principle to what we have seen throughout the pandemic, where the Government Departments (PHE, UK-HSA, DHSC etc) have all specified that RPE should only be used when determined necessary by “risk assessment”, when they all knew (*or should have known if they were receiving competent advice*) that it is physically impossible for anyone to carry out a “suitable and sufficient”, on-the-spot risk assessment for the close-quarter care of infectious patients. To all intents and purposes they are simply pushing an impossible decision-making process further down onto individuals at the front line, perhaps thinking that this will absolve them as individuals of future accountability. I think not.

And now, through your answer at the General Meeting I hear you in HSE saying the self-same thing – leaving it “down to individual risk assessments”.

It has always been my understanding of HSE’s central philosophy (as set out in “[Reducing Risks – Protecting People](#)”) that if a risk cannot be adequately assessed or there is uncertainty about the measures needed to control it, then the ‘precautionary principle’ should be invoked. Under these circumstances this would entail specifying RPE as a requirement for all close-quarter care of suspected or confirmed cases of COVID-19. At the outset of the pandemic, it was encouraging to see IPC guidance which advocated “the precautionary principle”. Sadly, between the 5th and 10th March 2020 the reference to “the precautionary principle” was dropped, as was the requirement for HCWs to be properly protected with RPE and surgical masks were mandated instead. I imagine that some healthcare workers may interpret the abandonment of the precautionary principle as “throwing caution to the wind” at their expense.

In your reply to one of the questions you stated that “the situation regarding RPE is not that clear cut now”. Clearly the RCN and many other stakeholders consider that you are wrong, as do I. With respect, the situation regarding RPE is absolutely crystal clear - at least as regards close-quarter care of patients.

Given that HSE have remained silent on the methodology for undertaking such risk assessments, the RCN took its own initiative to care for the safety of our nurses since it was apparent that no one else was going to. It published its own very comprehensive [risk assessment toolkit](#). You will note that in the facility for [assessing the risk of worker respiratory infection](#), it quite correctly concludes that general workplace ventilation is not going to be effective in preventing close range airborne infections. This leads to the only possible conclusion that RPE is required. As they correctly point out, **surgical masks are not RPE**. Under UK law Respiratory Protective Equipment has to be approved by the HSE. You, yourselves provide a very good explanation of this on your [website](#). HSE have never approved surgical masks as RPE, which is unsurprising since they are neither designed, constructed, tested nor certified as respiratory protective equipment. Their primary function is to protect others (e.g. patients) from droplets which may be emitted from the wearer’s (e.g. the HCW’s) mouth or nose. I remind you that your own laboratory’s research demonstrated that surgical masks are nigh on useless as protection against aerosols (Appendix 2). I am not swayed by your CEO’s affirmation that “*HSE scientific reports are the opinion of the individual researchers and not HSE as a whole*”. One has to query why vast amounts of public money are spent maintaining a research facility when your Executives can cherry-pick which findings they want to take on board.

Please would you confirm whether you agree with the RCN methodology and, if not, explain why not.

Furthermore, if you confirm that you do agree with it, then please will you apply your regulatory and enforcement powers to instruct the relevant IPC personnel that they must include this same methodology in their National IPC Manuals and insist that healthcare workers be properly protected when providing direct care for COVID-19 patients, using your "Improvement Notice" powers if need be.

I have 2 further observations relating to other answers given at the General meeting:

- 1) It was disappointing that, in your answer to Ms Dunn, you did not take the opportunity to publicly clarify, or even acknowledge, the airborne route of transmission of COVID-19, since this lies at the very heart of the matter under discussion. The fact that COVID-19 is transmitted via the airborne route must be well known to you, since your Chief Scientific Advisor has, for a long time now, been very clear on that point and one assumes that he briefs you on this, just as he has done when advising Members of Parliament at the House of Commons Select Committees.
- 2) You commented that the Covid situation was evolving and everything was moving as knowledge was developing – implying that things were fast-moving and everyone was having to figure out what to do at speed.

On the other hand, your colleague Mr White calmly explained that actually "*the framework of controls in the workplace for health and safety have been around for donkeys' years, there is nothing new here in terms of what people are supposed to do in relation to controlling risk generally in the workplace*".

So I cannot see why the well-established 'framework of controls' set out in the COSHH Regulations wasn't just implemented as it had always stood (i.e. RPE is required for airborne hazards). At the outset of a global pandemic emergency the last thing anyone should do is to depart from the tried and tested framework and set off down a completely untried and untested path. The rules and guidance were there, clearly set out in legislation, codes of practice and guidance documents. They should have been followed – and should still be followed to this day. They are not.

Despite Mr White's very valid observation that the "hierarchy of risk controls has been around for donkeys' years", it is clear that HSE do not rely upon employers properly applying it to arrive at the correct level of protection for their employees and provide clear guidance which is often underpinned by the legal 'clout' of an 'Approved Code of Practice'. I could give numerous examples but these few will illustrate the point:

- Work with asbestos : Approved Code of Practice [L143](#) specifies that suitable RPE must be used;
- Paint spraying (e.g. engineering workshops): Guidance [HSG 129](#) specifies suitable RPE must be used;
- Cleaning evaporative condensers (legionella) : Guidance [HSG 274](#) specifies suitable RPE must be used.

However, we don't need to look at other industry sectors. For many years HSE has provided its own specific guidance for the protection of healthcare workers from SARS viruses which is very clear and unambiguous. It said that "infection control measures for inpatients should include ... use of FFP3 filtering masks for persons entering the room". I would ideally have provided a hyperlink to this page on the HSE website, which used to be at www.hse.gov.uk/biosafety/diseases/sars.htm. However, within a few days of my letter to your Chief Executive on 24th March in which I commented on this guidance and its relevance to caring for patients during the current pandemic, the web page was hastily taken down by yourselves – as you would see if you were to click on the above link. Some commentators might interpret this as HSE 'airbrushing' history in preparation for the Public Inquiry. Anyway, to ensure that the page is preserved online for posterity I include a copy of the relevant section at appendix 3.

The UK is now virtually the only 'first world country' not to be routinely providing its healthcare workers with proper respiratory protective equipment when providing direct care to COVID-19 patients. In the rest of Europe the guidance to wear filtering facepiece respirators (FFP) was introduced as long ago as May 2020. Canada adopted this policy late last year and the USA in February this year – even specifying filtering N95 masks for porters moving patients around the hospitals on trolleys. Why is the UK so unwilling to adopt the protective standards for healthcare workers that have been implemented in so many other countries?

Yours Sincerely

DFJ Osborn BSc CMIOSH SpDipEM



Chartered Safety and
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(contact details provided on
accompanying e-mail)

Appendix 1 : Q&A Session, HSE General Meeting at Bootle HQ, 26 July 2022

Summary of Questions and Answers relating to COVID-19 for healthcare workers

1) Question by Ms Estephanie Dunn, Royal College of Nursing (RCN):

- We know that Covid is still with us, we know that Covid is airborne and we know that healthcare workers are at risk due to the nature of their work;
- Why then did HSE not provide specific guidance for the health and social care sectors regarding the use of Respiratory Protective Equipment (RPE) and publicly clarify the airborne route of transmission?

Response by Mr Rick Brunt, HSE Director of Engagement and Policy:

- The Covid was situation evolved and everything was moving as knowledge was developing;
- HSE advised the Health and Social Care Sector and worked with the DHSC who took the lead;
- HSE's Chief Scientific Adviser had meetings with the SAGE committee;
- Early on it was realised that PPE was needed for people involved with Aerosol Generating Procedures (AGPs);
- PPE is always the last resort. Circumstances weren't clear cut. It wasn't something that, straight off, we should control with RPE and nor is that situation that clear cut now.

2) Question and Observations raised by Ms Leona Cameron (RCN)

- Whilst agreeing that PPE is the last resort but, where other control measures are in place and a residual risk remains, then RPE should be worn
- A clear and unambiguous message needs to be given as to what RPE do you wear (e.g. an FFP3 mask) and when do you wear it?
- The focus was on Aerosol Generating Procedures, but the point is that we also generate aerosols when we speak, when we shout, when we as we sneeze, when we cough.
- That is where the ambiguity and confusion has been and this is where clarity is needed.

Response by Mr Rick Brunt, HSE Director of Engagement and Policy:

- A lot of this is recognised. It did come back to what is the overall combination of control measures and the "Hierarchy of Control";
- If there is a residual risk, there is a role for PPE but that will vary and that's down to individual risk assessments, not a blanket caveat that this is the way to do it.

3) Question & Observations raised by Mr Nick Pahl, CEO, Society of Occupational Medicine

- There have been much higher death-rates amongst health and social care staff on the front line;
- There was some oversight of those risk assessments from HSE but, in terms of communication and follow-through on those risk assessments for health and safety, it was rather chaotic;
- The question for HSE at the Public Inquiry will be how those risk assessments were developed and what regulatory oversight there was by HSE;
- If there had been better risk assessments then there would have been a more coherent view about PPE.

Response by Mr Philip White, HSE Director of Regulation:

- At the end of the day, the framework of controls in the workplace for health and safety have been around for donkeys' years, there is nothing new here in terms of what people are supposed to do in relation to controlling risk generally in the workplace. The 'hierarchy of control' is well established;
- At the end of 2020 HSE inspected about 18 health trusts. Looked at leadership, looking at infection control and looking at PPE;
- Looking forward, there are big challenges around risk management within the health and social care sector. HSE have learned a number of lessons and hopefully the health and social care sector has learned a number of lessons.

Appendix 2 : HSE research into the effectiveness of surgical masks

Extracts from research commissioned as part of UK preparations for a **pandemic**



Health and Safety
Executive

Evaluating the protection afforded by surgical masks against influenza bioaerosols

Gross protection of surgical masks compared to filtering facepiece respirators

Prepared by the **Health and Safety Laboratory**
for the Health and Safety Executive 2008

Objectives

The UK is advanced in its preparations for a potential outbreak of human pandemic influenza.

Whilst surgical masks may, in principle, offer adequate protection against large droplets and contact transmission, the level of protection they offer against a residual aerosol risk is poorly understood. They are not designed, or certified, as respiratory protective devices. However, there is a common misperception that they will provide protection against aerosols.

Main Findings

Surgical masks and filtering facepiece (FFP) respirators were tested on a human volunteer using an inert aerosol challenge. From the results of this study, it can be concluded that surgical masks will mitigate a mean reduction factor of around 2 against a simulated sneeze of inert airborne particles compared to FFP respirators, which are capable of offering a mean reduction factor of 100 or higher.

Surgical masks were also tested on a breathing dummy head and subjected to an aerosol challenge containing live influenza virus. Infectious, viable virus could be detected in the air behind all surgical masks challenged. A mean reduction factor of 6 was measured.

protect healthcare workers. This places a heavy reliance on the use of personal protective equipment (including RPE) and vaccination. In the first waves of a pandemic, it is unlikely that a protective vaccine will be available. Therefore, PPE (including RPE) will play a major part in the control programme. As a result, it is important to be able to correctly select the appropriate type and class of PPE and RPE and to be aware of any limitations that may exist in the protection it affords.

Recommendations

In principle, surgical masks that are worn correctly should provide adequate protection against large droplets, splashes and contact transmission. They may also reduce to some degree any residual aerosol risk, although this level of protection might not sufficiently reduce the likelihood of transmission via this route. Consequently they should not be used in situations where close exposure to infectious aerosols is likely.

6 What advice does HSE have for health care workers?

HSE has the following advice, which complements that provided by the Health Protection Agency.

If a patient fitting the definition for a suspect or probable case of SARS is admitted to the hospital, clinicians should notify infection control personnel immediately. A risk assessment must be done for all work with the person who has suspect or probable SARS, and appropriate control measures put in place to reduce the risk of any healthcare worker who comes into contact with the patient being exposed to the SARS virus. Until the cause and route of transmission are known, in addition to standard precautions (sometimes known as universal precautions), infection control measures for inpatients should include:

See note below

- Airborne precautions, eg
 - Either an isolation room with negative pressure relative to the surrounding area or a single room with own bathroom facilities, and
 - Use of FFP3 filtering masks conforming to EN 149:2001 for persons entering the room. This equipment must be face-fit tested before use.
- Contact precautions (including use of long sleeve fluid repellent gown and latex or similar non-latex gloves with tight fitting cuffs for contact with the patient or their environment).
- Standard (universal) precautions including careful attention to hand hygiene.
- When caring for suspect or probable SARS cases, healthcare workers should wear eye protection for all patient contact.
- Standard (universal) precautions when handling any clinical waste, which must be placed in leak-proof biohazard bags or containers and disposed of safely.
- Laundry should be classified as infected.
- If hospitals lack isolation facilities and lots of cases occur, then cohort nursing is recommended as per WHO guidelines.
- Long sleeve fluid repellent gowns and latex or similar non-latex gloves with tight fitting cuffs should be worn by all persons entering the room of a suspect or probable SARS case (until more is known about transmissibility).
- It is not necessary to use disposable crockery or cutlery when caring for suspect or probable SARS cases in hospital.
- Hypochlorite is the recommended disinfectant for environmental decontamination of areas where the suspect or probable SARS case has been in the hospital (e.g., A&E department).

(This information is also consistent with the guidance provided by WHO.)

The Department of Health has also issued some guidance for [Health Care Workers](#)^[8], which covers managing SARS cases, sampling suspected individuals, infection control etc.

Note: The route of transmission of SARS viruses via the airborne route is well-established, proven beyond doubt and accepted by World Health Organisation, UK Government, HSE's Chief Scientist and many others.

The virus may also be transmitted by droplets (which are just larger versions of aerosols) but at no time before or during the COVID-19 pandemic has any reliable evidence ever been produced to show that the SARS virus is only transmitted by the "droplet" route and not by the "airborne" route.

Given that the disease has always been transmissible via airborne aerosols, the above guidance should have never been abandoned and Respiratory Protective Equipment such as FFP3 respirators should have been provided to keep healthcare workers safe from the disease. That should still be the case now and remain the case going forward.

Although the above extract related to the original SARS outbreak in 2003, the COVID-19 virus is very similar in terms of its size and shape and all available evidence suggests that such viruses do not 'downgrade' their routes of transmission. In other words, once capable of spreading from person to person through the air they are unlikely to evolve in a manner that is less effective at transmission.

Once airborne, always airborne